Amendments to the Claims:

This listing of claims will replace all prior versions and listings of the claims in the application:

1. (Original) An isolated nucleic acid molecule having the sequence of SEQ ID NO:1, said nucleic acid molecule comprising a nucleotide sequence encoding a human ABCA2 transporter protein about 2436 amino acids in length, said encoded transporter protein comprising a multi-domain structure including a multiplicity of glycosylation and phosphorylation sites, a lipocalin signature motif, nucleotide binding folds having Walker A and B ATP binding sites, and a plurality of membrane spanning helices.

2. (Original) The nucleic acid molecule of claim 1, which is DNA.

3. (Original) The DNA molecule of claim 2, which is a cDNA comprising a sequence approximately 7.3 kilobase pairs in length that encodes said human ABCA2 transporter protein.

4. (Original) The DNA molecule of claim 2, which is a gene comprising introns and exons, the exons of said gene specifically hybridizing with the nucleic acid of Sequence I.D. No. 1, and said exons encoding said ABCA2 transporter protein.

5. (Withdrawn) An isolated RNA molecule transcribed from the nucleic acid of claim 1.

6. (Currently amended) The nucleic acid molecule of claim 1, wherein said sequence encodes a human ~~ABC2~~ ABCA2 transporter protein having an amino acid sequence selected from the group consisting of Sequence I.D. No. 2 and amino acid sequences encoded by natural allelic variants of said sequences.

7. (Original) The nucleic acid molecule of claim 6, which comprises Sequence I.D. No. 1.

8. (Withdrawn) An antibody immunologically specific for the protein encoded by the nucleic acid of claim 1.

9. (Withdrawn) An antibody as claimed in claim 8, said antibody being monoclonal.

10. (Withdrawn) An antibody as claimed in claim 8, said antibody being polyclonal.

11. (Original) A plasmid comprising a nucleotide sequence having the sequence of Sequence I.D. No. 1.

12. (Original) A vector comprising a nucleotide sequence having the sequence of Sequence I.D. No. 1.

13. (Original) A retroviral vector comprising a nucleotide sequence having the sequence of Sequence I.D. No. 1.

14. (Original) A host cell comprising a nucleic acid molecule having a sequence of Sequence I.D. No. 1.

15. (Original) A host cell as claimed in claim 14, wherein said host cell is selected from the group

consisting of bacterial, fungal, mammalian, insect and plant cells.

16. (Original) A host cell as claimed in claim 14, wherein said nucleic acid is provided in a plasmid and is operably linked to mammalian regulatory elements which confer high expression and stability of mRNA transcribed from said nucleic acid.

17. (Withdrawn) A host cell as claimed in claim 14, wherein said nucleic acid is provided in a plasmid and is operably linked to mammalian regulatory control elements in reverse anti-sense orientation.

18. (Withdrawn) A host animal comprising a nucleic acid molecule having the sequence of Sequence I.D. No. 1.

19. (Currently amended) A host animal as claimed in claim 18, wherein said animal harbors a homozygous null mutation in its endogenous ABCA2 gene wherein said mutation has been introduced into said mouse or an ancestor of said mouse
via homologous recombination in embryonic stem cells, and further wherein said mouse does not express a functional mouse ~~ABC2~~ ABCA2 protein.

20. (Withdrawn) The transgenic mouse of claim 18, wherein said mouse is fertile and transmits said null mutation to its offspring.

21. (Currently amended) The transgenic mouse of claim 18, wherein said null mutation has been introduced into an ancestor of said mouse at an embryonic stage following

microinjection of embryonic stem cells into a mouse ~~blastocyt~~ blastocyst.

22. (Currently amended) A method for screening a test compound for inhibition of human ABCA2 mediated transport, comprising:
a) providing a host cell expressing ~~a~~ the human ABCA2-encoding nucleic acid of claim 1 ~~having a sequence of Sequence I.D. No. 1~~;
b) contacting said host cell with a compound suspected of inhibiting human ~~ABC2~~ ABCA2-mediated transporter activity; and
c) assessing inhibition of transport mediated by said compound.

23. (Withdrawn) A method as claimed in claim 22, wherein inhibition of human ABCA2-mediated transport is indicated by restoration of anticancer drug sensitivity.

24. (Withdrawn) A method as claimed in claim 22, wherein said inhibition of human ABCA2-mediated transport is indicated by a reduction of transporter mediated cellular efflux of anticancer agents.

25. (Withdrawn) A kit for detecting the presence of human ABCA2 encoding nucleic acids in a sample, comprising:
a) oligonucleotide primers specific for amplification of human ABCA2-encoding nucleic acids;
b) polymerase enzyme;
c) amplification buffer; and
d) human ABCA2 specific DNA for use as a positive control.